

INFORMATION REPORT INFORMATION

CENTRAL INTELLIGENCE AGENCY

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SUBJECT Soviet Oil Drilling Equipment
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DATE OF INFO.
PLACE & DATE ACQ.
THIS IS UNEVALUATED INFORMATION.

- 1. A two-page report on Soviet oil drilling equipment

- ✓ 2. This report contains detailed information on the following equipment: Uralmash 3B, Uralmash 9A, and the BY75 drilling unit.

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In July 1961, the two most widely-used Oil-drilling Equipments in the U.S.S.R. were the URALMASH 3B and the URALMASH 9A. The following brief details were noted:

2. URALMASH 3B:

Capacity	5000 mtrs. (16,500 ft.)
Total Power Input	2000 BHP. @ 1600 r.p.m.
	1700 BHP. @ 1200 r.p.m.
Drawworks Power Input	1200 BHP. @ 1600 r.p.m.
Slush Pump Power Input	470 BHP. @ 310 r.p.m.

Drive Arrangement, 5-engine Set - Three engines for draw-works which also served to power No. 1 Drilling Pump, two engines for independent drilling pump.

Drive Arrangement, 9-engine Set - Three engines for Draw-works and No. 1 pump.

3 x 2 engine sets for each of three independent pumps.

This particular equipment, although in current use, cannot be described

as modern Its capacity is roughly that of the National Type 80B which has a considerable lower power requirement. It had the appearance of being based possibly on German designs.

When the speed of 1600 r.p.m. was queried, the enquirer was told that many of the rigs had been adapted to a reduced speed of 1500 r.p.m.

3. URALMASH 9A:

Capacity	3000 metres.
Max B.H.P. Input	1200 (at Draw-works)
Pump Input B.H.P.	450 B.H.P.
Engines	2 (Torque convertors)
B.H.P.	800
Speed	1600 r.p.m.
Pumps	2
Diesel Generators	2
Rating	100 kW. @ 50 cycles A.C.

This is a considerably more modern type of equipment than the 3A and 50X1-HUM appears to be contemporary with the most up-to-date rigs.

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4. The chief difficulty experienced by the Russians when they export their drilling equipment is that their engines need major overhauls much more frequently than those made by a first-class Western manufacturer (every 5 thousand hours compared with 15 to 20 thousand hours for example). Moreover, they have no service organisation outside Russia and the adequate provision of spares is a serious problem for them.

5. Later, in 1962, the Soviet drilling unit BY-75 bp which is suitable for turbo- and conventional drilling to 2400 metres, has come into general use.

The following figures are the Russian specification:

No. of tool-hoist speeds	4
Total performance of Power drive	800 H.P.
Power transmitted to draw-works	630 H.P.
Power transmitted to rotary	220 H.P.
Maximum table speed	212 r.p.m.
Height of mast	40.8 metres
No. of slush pumps	1 or 2
Total weight of drilling unit	146 metric tons.

It is a portable rig and the hook-up permits of four reversible drum speeds and two reversible table speeds. The chain compounding is arranged for both engines to drive the draw-works or the pump or alternatively, for one engine to drive the draw-works and rotary and the other engine to drive the pump

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